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A RECORD OF THE EUPHAUSIID *THYSANOPODA MONACANTHA* ORTMANN, 1893 FROM THE COAST OF TENERIFE (CANARY ISLANDS)

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With one figure

ABSTRACT. A first record of *Thysanopoda monacantha* ORTMANN, 1893 for Tenerife and the western islands of the Canaries is given. The morphological characters, geographical distribution and range are given. A key is presented for the identification of the species of the genus *Thysanopoda* present in the waters of the Canary Islands.

Key words: *Thysanopoda monacantha*, *Euphausiacea*, *Euphausiidae*, Canary Islands.

RESUMEN. Se indica por vez primera para Tenerife y las Islas Canarias occidentales, la presencia de *Thysanopoda monacantha* ORTMANN, 1893, dándose las características morfológicas, distribución geográfica y batimétrica, así como una clave para la diferenciación de las especies del género *Thysanopoda* citadas en aguas de Canarias.

Palabras clave: *Thysanopoda monacantha*, *Euphausiacea*, *Euphausiidae*, Canary Islands.

INTRODUCTION

The euphausiids of the Northern-Atlantic waters have been the object of a large number of studies (SARS, 1885; HOLT & TATTERSALL, 1905 and 1906; HANSEN, 1905a and 1905b; EINARSSON, 1945; GLOVER, 1952; DAHL, 1961; MEIRA, 1970; ANDREU & SANTAMARIA, 1975; ANDREU, 1976; GROS & COCHARD, 1978; among others) dealing with their taxonomy, geographical distribution and

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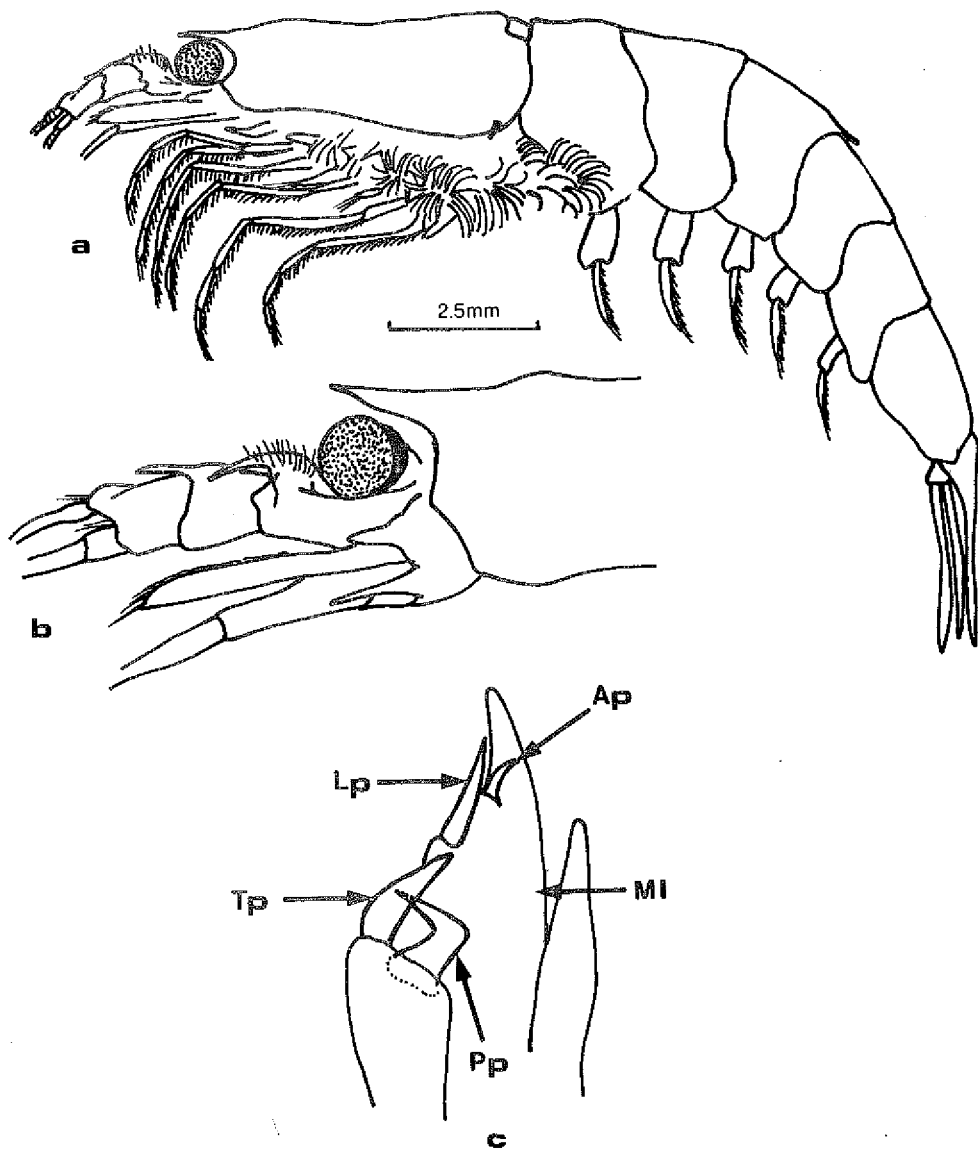


Fig. 1 - *Thysanopoda monacantha* (male, 19 mm total length). a - lateral view; b - peduncles of antennae and cephalothoracic region; c - petasma: Tp= terminal process, Pp= proximal process, Lp= lateral process, Ap= additional process and MI= median lobe (after BRINTON, 1975).

vertical migrations. In this respect the waters of the archipelago of the Canaries badly lack profound investigations, being reduced to those carried out by oceanographic voyages when passing the islands such as those of the "Atlantide" in 1945 and 1946 in the tropical waters of the Western African coasts (BODEN, 1961), and the "Discovery" Sord Cruise in 1965 south-east of Fuerteventura (BAKER, 1970); and by BRAUN (1986); ROS & LOZANO SOLDEVILLA (1986); LOZANO SOLDEVILLA *et al.* (1988) and LOZANO SOLDEVILLA (in press) in the waters of Tenerife.

However, the family Euphausiidae is represented in the Canary islands by species belonging to the genera *Thysanopoda* MILNE-EDWARDS, 1830; *Nyctiphanes* SARS, 1883; *Euphausia* DANA, 1852; *Thysanoessa* BRANDT, 1851; *Nematoscelis* SARS, 1883; *Nematobrachion* CALMAN, 1905 and *Stylocheiron* SARS, 1883.

Up to the present the genus *Thysanopoda* had been represented in the Canary Islands, by *T. aequalis* HANSEN, 1905 in the south of the Canaries (Atlantide Expedition, st. 24, 27° 23' N - 16° 36' W); *T. monacantha* ORTMANN, 1893; *T. cristata* SARS, 1883; *T. subaequalis* BODEN, 1854; *T. obtusifrons* SARS, 1883; *T. pectinata* ORTMANN, 1893; *T. microphthalma* SARS, 1885 in the south-east of Fuerteventura (BAKER, 1970); and *T. aequalis-subaequalis* in the north-east of Tenerife (ROS & LOZANO SOLDEVILLA, 1986).

The capture of two specimens of *T. monacantha* near the coast of Tenerife presented in this paper, is the second record for this species in the Canaries and the first record for the western islands of this Archipelago. In the present paper, based on MAUCLINE & FISHER (1969), characteristics of the specimens, the geographical distribution, the bathymetry of the species and a identification key of the species belonging to the genus present in the Canaries are given.

STUDY MATERIAL

Candelaria (Tenerife). May 10th of 1989. Two males of 5.5 mm of cephalothoracic length; 19 and 21 mm total length, and 0.28 and 0.30 g of weight, respectively, in 1 metre depth (Fco. I. PÉREZ *leg.*).

MORPHOLOGICAL CHARACTERISTICS

(Figure 1)

Eyes of globular medium size. Carapace with frontal plate of triangular shape, projecting forward in the shape of straight pointed rostrum, not reaching the anterior margin of the eyes. Ventral margins of the carapace with a denticle

in the posterior zone. Anterior part of the dorsal lobe of the first antennular segment pointed and projecting over the second segment in lateral form and downwards, reaching the median point; second antennular segment with a spine-shaped process, similar to that of the first segment, but projected over the dorsal margin of the third antennular segment; third antennular segment with a broad (large) keel on the inner dorsal side.

Sixth and seventh pairs of thoracic legs similar in structure; the eighth being rudimentary.

Third abdominal segment with a strong spine in the middle of that; the sixth segment greater than the fifth.

Terminal process of petasma slightly curved near the basal zone and gradually narrowing ending in a point in the distal portion. Proximal process curved, with a wide basal zone and a terminal one pointed at the level of the inner border of the anterior process. Lateral process broad, practically straight and extending along the median lobe. The additional process very short and curved.

GEOGRAPHICAL DISTRIBUTION AND RANGE

T. monacantha is a pelagic species the adults of which live during the day in depths down to 750 metres and perform daily vertical migrations to shallow waters.

Distributed over wide geographical areas, mainly tropical ones, of the Atlantic, Pacific and Indian Oceans. In the Atlantic Ocean both the eastern and western parts between 40° N and 40° S; in the Pacific Ocean approximately between 35° N and 38° S, excluding, however the cold waters of the California and Perú currents; in the Indian Ocean between 10° N and 40° S (MAUCHLINE & FISHER, 1969, and MAUCHLINE, 1980).

OBSERVATIONS

The two studied specimens, captured together with various specimens of *Sergestes* sp. (Sergestidae), were probably dragged to near the shore after upward vertical migration.

KEY TO THE SPECIES OF THE GENUS *THYSANOPODA* IN WATERS
OF THE CANARY ISLANDS

- 1a. Carapace without a distinct cervical groove. Sixth abdominal segment longer than the fifth. Lateral denticle (denticles) present on inferior margin of carapace, often being very small..... 2a
- 1b. Carapace without a distinct cervical groove. Sixth abdominal segment longer than the fifth. No lateral denticle on inferior margin of carapace 6a
- 2a. One or more abdominal segments armed with dorsal spine 3a
- 2b. Abdominal segments armed with dorsal spine 4a
- 3a. Dorsal spine on third abdominal segment only; fourth and fifth slightly produced. Single lateral denticle on carapace. No spine at base of rostrum
..... *T. monacantha* ORTMANN
- 3b. Dorsal spine on fourth and fifth abdominal segment only; sixth abdominal segment only slightly larger than fifth *T. cristata* SARS, 1883
- 4a. Lappet at distal end of first antennular segment produced beyond mid-point of second segment and flaring laterally and outward, covering upper, outer part second segment. Lateral plate (rostrum) not extending beyond eyes 5a
- 4b. Lappet at distal end of basal segment of antennular peduncle not produced as far as mid-point of second segment *T. obtusifrons* SARS, 1883
- 5a. Frontal plate (rostrum) in lateral view thin and tapering; sometimes rudiments of rostral process present. Propodal segment of endopodite of third thoracic leg of males normal *T. aequalis* HANSEN, 1905
- 5b. Frontal plate (rostrum) in lateral view has anterior margin thickened, fleshy in appearance. Propodal segment of endopodite of third thoracic leg of male greatly reduced and dactylus modified as long naked spine *T. subaequalis* BODEN, 1954
- 6a. Superior distal margin of lappet on basal segment of antennular peduncle pectinate
..... *T. pectinata* ORTMANN, 1893
- 6b. Superior distal margin of lappet on basal segment of antennular peduncle not pectinate. Dorsal posterior margin of fourth and fifth abdominal segments very slightly acuminate. Antennal scale reaches to end of second segment
..... *T. microphthalma* SARS, 1885

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NOTES ON TWO MADEIRA PLANTS

By N. C. H. KRAUSS ¹

The composite plant «Abundância» (*Eupatorium adenophorum* Spreng.) has been known in Madeira for many years. On July 24, 1962 I collected a second species of *Eupatorium*, *E. riparium* Schultz-Bip., confirmed by the Royal Botanic Garden, Kew, England. This was growing in association with *E. adenophorum* in a damp area along a path near Monte. Both these species of *Eupatorium* are native to Mexico. I have seen *E. riparium* growing along a small stream in a ravine at the Desierto de los Leones, Distrito Federal, in the hills above Mexico City. Both species are pests in grazing land in Hawaii.

On November 7, 1960 I collected specimens of *Ulex minor* Roth (determined by Royal Botanic Garden, Kew) in the grassy hills above Ribeiro Frio. Since then I have seen it also at Encumeada and Santo da Serra. *Ulex europaeus* L. has been known in Madeira for a long time, but I have not seen any records of *U. minor*.

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